CLAIM LIST

1-29 (canceled)

30. (currently amended) A system for imaging a section of a medium which receives and returns light from the section and from sites adjacent to the section, said system comprising:

optics for directing light in beams of different polarization in said medium along an imaging plane inside the medium and collecting returned light from the medium, wherein said optics further comprise an objective, and said light directed into the medium and said returned light collected from the medium each share substantially an entirety of said objective;

means for generating an image of the section from said returned light in response to a polarization parameter of said returned light; and

wherein said beams are overlapping in said medium outside the imaged section to reduce the part of said returned light from the sites adjacent said section on opposite sides of said section in the direction of propagation of the beams.

31. (previously presented) The system according to Claim 30 wherein said beams are incident said medium at spots spaced in at least one direction along an imaging plane.

32. (currently amended) The system according to Claim 31 30 wherein said polarization parameter is the degree of rotation of the polarization of said returned light.

33. (currently amended) The system according to Claim 31 30 wherein said polarization parameter is a function of the differential circular dichroism or optical activity of the returned light.

34. (canceled)

35. (currently amended) A method for imaging a section of a medium which receives and returns light from the section and from sites adjacent to the section, said method comprising the steps of:

directing light in beams of different polarization in said medium along an imaging plane inside the medium;

collecting returned light from the medium, in which said light directed into said medium and said returned light collected from said medium substantially share <u>an entirety of</u> a common objective;

generating an image of the section from said returned light in response to a polarization parameter of said returned light; and

wherein said beams are overlapping in said medium outside the image section to reduce the part of said returned light from the sites adjacent said section on opposite sides of said section in the direction of propagation of said beams.

36. (currently amended) The method according to Claim ~~36~~ <u>35</u> wherein said beams are incident said medium at spots spaced in at least one direction along an imaging plane.

37. (currently amended) The method according to Claim ~~36~~ <u>35</u> wherein said polarization parameter is the degree of rotation of the polarization of said returned light.

38. (previously presented) The method according to Claim 35 wherein said polarization parameter is a function of the differential circular dichroism or optical activity of the returned light.

39. (currently amended) An optical coherence imaging system comprising:

a source providing light which is of low coherence;

optics which directs the light from said source into a reference arm and a sample arm to an image plane inside a specimen section;

a polarization separator which shears said light into two beams;

a polarization retarder between said separator and said specimen providing said sheared beams each with an opposite sense of generally orthogonal polarization;

an objective for focusing said two beams at spots spaced from each other in said image plane, which beams overlap in said section outside the vicinity of said image plane and on opposite sides of said plane in the direction of propagation of said beams;

a detection arm into which light is directed by said ~~beam splitter~~ <u>optics</u> from said reference and sample arms; and

means for providing images in response to interference of light in said detection arm which images are enhanced by reduction of light from said vicinity.

40. (allowed) The system according to Claim 39 wherein said optics comprise:

a beam splitter for directing light into a reference arm and a sample arm to an image plane; and

a scanner for scanning light of the sample arm in said plane in one or more directions.

41. (currently amended) The system according to Claim 39 wherein said separator is one ~~or~~ <u>of</u> a Normarski and Wollaston prism.

42. (allowed) The system according to Claim 39 wherein said orthogonal polarization is generally circular polarization.